

REMARKS

Claims 2 and 12-20 are pending in this application.

The January 16, 2008 Office Action (1) rejects claims 2, 12 and 14-19 under 35 U.S.C. §103(a) over U.S. Patent No. 7,061,139 to Young et al. (Young) in view of U.S. Patent No. 4,775,827 to Ijntema et al. (Ijntema); (2) rejects claim 13 under 35 U.S.C. §103(a) over Young in view of Ijntema, and further in view of U.S. Patent No. 5,196,780 to Pacholok; and (3) rejects claim 20 under 35 U.S.C. §103(a) over Young, in view of Ijntema, and further in view of U.S. Patent No. 6,295,215 to Faria et al. (Faria). Applicant respectfully traverses the rejections.

Independent claim 2 recites a "a control circuit for controlling an output voltage of the converter to be lower than a steady state voltage" (emphasis added). The control of the converter is further defined in dependent claim 18, which recites "wherein said limited discharge current of the storage battery, caused by controlling the output voltage of the converter to lower below the steady state, is almost constant at what is equivalent to 10-50 % of the maximum current of the load." The charging time used by the judgment circuit to judge the degradation of the storage battery occurs under the controlled output voltage of the converter, discussed above. This feature and its advantages is discussed, for example, at page 16, line 17 to the end of the specification as filed. As stated in the June 16, 2008 Request for Reconsideration, and regarding independent claim 2, Young and Ijntema fail to disclose the claimed control circuit.

The Office Action acknowledges that Young fails to disclose the claimed control circuit, but cites to Ijntema as curing this deficiency. While the Office Action cites to the control means 8 of Ijntema as corresponding to the claimed control circuit, Ijntema fails to disclose the control circuit of claim 2 because Ijntema's control means 8 does not control the output of a converter to be lower than a steady state voltage.

Ijntema discloses that the first adjusting means 10 stores a nominal discharging time of the battery 4 and that the second adjusting means 11 stores a nominal charging time of the battery 4. Ijntema discloses "[d]epending on the battery shaving or charging mode detected by the control means 8, the value stored in the first or in the second adjusting means is applied to the time-measuring means 12" (col. 5, line 52 to col. 6, line 1). The time-measuring means 12 uses these values to "determine the fraction which the elapsed discharging and charging times form of the total discharging time and charging time stored in the adjusting means 10 and 11 respectively" (col. 6, lines 4-8). That is, charging means 8 does not participate in any control of the output value of a converter, but instead participates in merely determining the fraction of discharging or charging that the battery 4 is estimated to have undergone. Ijntema further discloses that when the control means 8 detects the mains-shaving mode (battery-shaving mode), the value stored in memory 61 is applied to the frequency-divider 30 (col. 12, lines 31-36) and when the control means 8 detects the battery-charging mode, the value stored in the read-write memory 26 is applied to the frequency-divider 30 (col. 15, lines 30-32).

In all of these disclosed uses of control means 8; control means 8 merely detects the mode of operation of Ijntema's "device for indicating the charge status of a battery". This agrees with Ijntema's disclosure of the internal circuit of control means 8 as consisting of two AND-gates 20 and 21 that receive a signal that is high when switch S1 is closed (the battery-shaving mode) and a signal that is high when the power supply circuit 1 is connected to the mains (the battery charging mode), as disclosed in Ijntema at col. 8, lines 13-26.

As discussed in the June 16, 2008 Request for Reconsideration, Pacholok and Faria fail to cure the deficiencies of Young and Ijntema.

Thus, independent claim 2 and its dependent claims 12-20 are patentable over the applied references. For the foregoing reasons, Applicant requests withdrawal of the rejections.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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